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Our Ref.: 041122US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Kazuyo TERADA and Hidekazu MORI

Serial No.:10/580,237

Filed: May 25, 2006

For: BINDER FOR ELECTRIC DOUBLE LAYER CAPACITOR

DECLARATINO UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks,
P.O. Box 1450, Alexandria, VA 22313-1450

Sirs:

I, Hidekazu MORI, a Japanese citizen, residing at c/o ZEON CORPORATION, 6-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8246 Japan, hereby declare and state that I graduated from Osaka university in 1974, and I also declare that I have been employed by ZEON CORPORATION (Assignee of the present application) since 1974, and I now engage in Incubation Center.

I declare that I have read all of the documents concerning the above-entitled patent application and am familiar with the contents of the present invention in this application.

I further declare that the following experiments are all true and correct to the best of my own knowledge.

[Experiment]

1.OBJECT: Experiments were conducted in order to show the number of the glass transition temperature of the polymer in example 2 of YAMAKAWA et al. '686 (US 2002/0034686) and to show the performance of the electric double layer capacitor using the polymer.

2. Preparation of the polymer

Into a reactor equipped with a mechanical stirrer and a condenser were charged 674.9 parts of deionized water, 7.1 parts of 20% solution of sodium dodecylbenzenesulfonate in water, and 0.8 parts of sodium tripolyphosphate in the atmosphere of nitrogen,

and the resultant was heated to 75°C while stirred. To the reactor were added 82 parts of a 2.44% solution of ammonium persulfate in water. Next, 84 parts of 2-ethylhexyl acrylate, 2 parts of methacrylic acid, 10 parts of methacrylonitrile, 2 parts of ethylene glycol dimethacrylate and 2 parts of methoxypolyethylene glycol methacrylate were added to the reactor at a constant rate over 4 hours, and caused to react until the polymerization conversion ratio became 98%.

3. Evaluation of polymer

The evaluation of the above prepared polymer is conducted as the same procedure as in our description.

Glass transition temperature of the polymer : -52°C, just one glass transition temperature was recognized.

The particle diameter of the polymer: 120nm

The CV value : 100

4. Production of electrode and evaluation thereof.

The electrode was produced using the above prepared polymer and was evaluated by the same procedure as in the example 4 of our description.

Peel strength : 76

Heat resistance : 56

Flexibility(1) : ○

5. Production of electric double layer capacitor and evaluation thereof

The electric double layer capacitor was produced using the above obtained electrode and was evaluated by the same procedure of our description.

Electrostatic capacity : 26.5

Internal resistance : 5.9

6. Result

As explained above, the polymer in example 2 of YAMAKAWA et al. '686 (US 2002/0034686) has just one glass transition temperature. The electrode produced by using this polymer shows small peel

strength. And the electric double layer capacitor produced by using this electrode has small electrostatic capacity and large internal resistance, resulting in poor performance.

Dated this 9th day of March, 2009

Hidekazu Mori
Hidekazu MORI